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Titolo	Mueller-Matrix Tomography of Biological Tissues and Fluids : Digital Image Processing and Analysis Techniques / / by Zhengbing Hu, Yuriy A. Ushenko, Iryna V. Soltys, Oleksandr V. Dubolazov, M. P. Gorsky, Oleksandr V. Olar, Liliya Yu. Trifonyuk
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Nota di contenuto	Analytical Review of the Methods of Multifunctional Digital Mueller-matrix Laser Polarimetry -- Materials and Methods of Computer-Assisted Digital Mueller-Matrix Tomography of Biological Tissues and Fluids -- Differential Diagnosis of Tumors of the Prostate. Polarization-Singular Approach -- Polarization-Interference Mapping of Microscopic Images of Biological Layers and Polycrystalline Blood Films in the Differential Diagnosis of Benign and Malignant Tumors of the Prostate -- Information Analysis of Polarization-Holographic Mapping of Microscopic Images of Biological Samples of Tumors of the Prostate

	and Polycrystalline Blood Films in the Differential Diagnosis of the Severity of Pathological Conditions.
Sommario/riassunto	This book presents experimental investigations and digital image processing, highlighting the interaction of polarized radiation with phase-inhomogeneous and optically anisotropic biological layers. The promising and efficient use of vector-parametric description of the formation of polarization-inhomogeneous object fields is noted. Applications of a set of Mueller-matrix polarimetry methods are highlighted. The book includes- structural and logical scheme of multi-parameter (singular, interference and layer-by-layer Stokes-polarimetric), polarization-correlation study of the structure of distributions of the number of singularities, maps of local contrast of interference distributions and layer-by-layer maps of microscopic polarization azimuth and ellipticity; determination of relationships between changes in the magnitude of statistical parameters characterizing polarization-correlation distributions and pathology of prostate tumors.